TEAM® Industrial Services

SAFETY DATA SHEET

1. Product and Company Identification

Material name	**RF-300**
Version #	00
Issue date	20-August-2013
Revision date	20-August-2013
Supersedes date	-
CAS #	Mixture
Product code	804-0005
Product use	Industrial Leak Sealant.
Manufacturer information	
Manufacturer/Supplier	Team Industrial Services, Inc.
Address	200 Hermann Drive, Alvin, Texas 77511, US
Emergency telephone number	CHEMTREC - 24 HOURS USA: CHEMTREC: 800-424-9300 International: 703-527-3887 (Collect)

2. Hazards Identification

Physical state	Wet trowable mortar.
Appearance	Gray/Brown mixture of coarse to fine particles.
Emergency overview	WARNING Cancer hazard - can cause cancer. Causes severe eye irritation. Causes skin and respiratory tract irritation.
OSHA regulatory status	This product is hazardous according to OSHA 29 CFR 1910.1200.
Potential health effects	
Routes of exposure	Eye contact. Skin contact. Inhalation.
Eyes	Causes severe eye irritation.
Skin	Causes skin irritation.
Inhalation	Causes respiratory tract irritation.
Ingestion	Ingestion may cause irritation and malaise.
Chronic effects	Cancer hazard - can cause cancer. Prolonged and routine inhalation of fine quartz dust can lead to the lung disease known as silicosis. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
Signs and symptoms	Irritation of eyes and mucous membranes. Skin irritation. Cough. Irritation of nose and throat. Ingestion may cause irritation and malaise.
Potential environmental effects	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Mullite	1302-93-8	45-70
Silicic acid, sodium salt	1344-09-8	10-30
Cristobalite	14464-46-1	1-5
Quartz	14808-60-7	1-5
Silica, fume	69012-64-2	1-5

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures

Eye contact Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin contact Remove contaminated clothing and wash skin with soap and water. Get medical attention if irritation develops or persists.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion Immediately rinse mouth and drink plenty of water. Only induce vomiting at the instruction of medical personnel. Get medical attention if any discomfort occurs.

Notes to physician Treat symptomatically.

General advice Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In case of shortness of breath, give oxygen. Keep victim warm.

5. Fire Fighting Measures

Flammable properties No unusual fire or explosion hazards noted.

Extinguishing media

Suitable extinguishing media Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media No restrictions known.

Protection of firefighters

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Protective equipment and precautions for firefighters Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Use standard firefighting procedures and consider the hazards of other involved materials. Cool material exposed to heat with water spray and remove it if no risk is involved.

Hazardous combustion products Carbon oxides. Silicon oxides.

6. Accidental Release Measures

Personal precautions Avoid inhalation of dust and contact with skin and eyes. Avoid prolonged and repeated contact. See Section 8 of the MSDS for Personal Protective Equipment.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

Methods for containment Prevent entry into waterways, sewer, basements or confined areas.

Methods for cleaning up Collect and dispose of spillage as indicated in section 13 of the MSDS.

Other information Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling Mechanical ventilation or local exhaust ventilation is required. Avoid inhalation of vapors/dust and contact with skin and eyes. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Observe good industrial hygiene practices.

Storage Keep in a cool, well-ventilated place. Keep away from food, drink and animal feeding stuffs. Store locked up. Store away from incompatible materials (See Section 10).

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.025 mg/m3	Respirable fraction.
Mullite (CAS 1302-93-8)	TWA	1 mg/m3	Respirable fraction.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.15 mg/m3	Total dust.
		0.05 mg/m3	Respirable.
		1.2 millions of particle	Respirable.
Quartz (CAS 14808-60-7)	TWA	0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		2.4 millions of particle	Respirable.
Silica, fume (CAS 69012-64-2)	TWA	0.8 mg/m3	
		20 millions of particle	

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.025 mg/m3	Respirable particles.
		0.025 mg/m3	Respirable.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable particles.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.025 mg/m3	Respirable fraction.
Mullite (CAS 1302-93-8)	TWA	1 mg/m3	Respirable.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Silica, fume (CAS 69012-64-2)	TWA	4 mg/m3	Total fume.
		1.5 mg/m3	Respirable fume.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.05 mg/m3	Respirable.
Mullite (CAS 1302-93-8)	TWA	1 mg/m3	Respirable fraction.
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable.
Silica, fume (CAS 69012-64-2)	TWA	2 mg/m3	Respirable.

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.05 mg/m3	Total dust.
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable dust.
Silica, fume (CAS 69012-64-2)	TWA	2 mg/m3	Respirable dust and/or fume.

Mexico. Occupational Exposure Limit Values

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.05 mg/m3	
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m3	
Silica, fume (CAS 69012-64-2)	TWA	3 mg/m3	Respirable dust.
		10 mg/m3	Inhalable particulate.

Engineering controls Mechanical ventilation or local exhaust ventilation is required. Provide easy access to water supply and eye wash facilities. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Personal protective equipment

Eye / face protection	Wear approved safety glasses or goggles.
Skin protection	Wear protective gloves. Wear suitable protective clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134. If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Observe any medical surveillance requirements.

9. Physical & Chemical Properties

Appearance	Gray/Brown mixture of coarse to fine particles.
Physical state	Wet trowable mortar.
Form	Paste.
Color	Gray-brown.
Odor	Not available.
Odor threshold	Not available.
pH	7 - 9
Vapor pressure	Not available.
Vapor density	Not available.
Boiling point	Not Applicable.
Melting point/Freezing point	Not available.
Solubility (water)	Insoluble (in water).
Specific gravity	Mixture
Flash point	Not applicable.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not applicable.
Evaporation rate	Not Applicable.
Viscosity	Not applicable.
Percent volatile	0 %
Partition coefficient (n-octanol/water)	Not applicable.

Other data

Explosive properties	Not applicable.
Oxidizing properties	Not applicable.

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid dust formation.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides. Silicon oxides.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Silica, fume (CAS 69012-64-2)		
Acute		
Oral		
LD50	Rat	> 22500 mg/kg
Silicic acid, sodium salt (CAS 1344-09-8)		
Acute		
Oral		
LD50	Rat	1280 mg/kg

Sensitization Not a skin sensitizer.

Acute effects Ingestion may cause irritation and malaise.

Local effects Causes severe eye irritation. Causes skin and respiratory tract irritation.

Chronic effects Prolonged and routine inhalation of fine quartz dust can lead to the lung disease known as silicosis.

Carcinogenicity Cancer hazard - can cause cancer.

ACGIH Carcinogens

Cristobalite (CAS 14464-46-1)	A2 Suspected human carcinogen.
Mullite (CAS 1302-93-8)	A4 Not classifiable as a human carcinogen.
Quartz (CAS 14808-60-7)	A2 Suspected human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Cristobalite (CAS 14464-46-1)	1 Carcinogenic to humans.
Quartz (CAS 14808-60-7)	1 Carcinogenic to humans.
Silica, fume (CAS 69012-64-2)	3 Not classifiable as to carcinogenicity to humans.

US NTP Report on Carcinogens: Known carcinogen

Cristobalite (CAS 14464-46-1)	Known To Be Human Carcinogen.
Quartz (CAS 14808-60-7)	Known To Be Human Carcinogen.

Mutagenicity No data available.

Reproductive effects No data available.

Symptoms and target organs Irritation of eyes and mucous membranes. Skin irritation. Cough. Irritation of nose and throat.

12. Ecological Information

Ecotoxicological data

Components		Species	Test Results
Silicic acid, sodium salt (CAS 1344-09-8)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	247 mg/l, 4.2 days
Fish	LC50	Western mosquitofish (Gambusia affinis)	1800 mg/l, 96 hours

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Environmental effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Persistence and degradability No data available.

Bioaccumulation / Accumulation No data available.

Partition coefficient No data available.

Mobility in environmental media No data available.

13. Disposal Considerations

Waste codes Not regulated.

Disposal instructions Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Recover and reclaim or recycle, if practical.

Contaminated packaging Dispose product packaging in accordance with local authority requirements taking into account characteristics of the packaging material.

14. Transport Information

DOT

Not regulated as a hazardous material by DOT.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

TDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance (40 CFR 355, Appendix A) No

SARA 311/312 Hazardous chemical Yes

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15) Not controlled

Canadian regulations This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status Controlled

WHMIS classification D2A - Other Toxic Effects-VERY TOXIC
D2B - Other Toxic Effects-TOXIC

WHMIS labeling

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

State regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Hazardous Substances (Director's): Listed substance

Silica, fume (CAS 69012-64-2)	Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Cristobalite (CAS 14464-46-1)	Listed.
Quartz (CAS 14808-60-7)	Listed.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Cristobalite (CAS 14464-46-1)	Listed: October 1, 1988 Carcinogenic.
Quartz (CAS 14808-60-7)	Listed: October 1, 1988 Carcinogenic.

US - New Jersey RTK - Substances: Listed substance

Cristobalite (CAS 14464-46-1)	Listed.
Quartz (CAS 14808-60-7)	Listed.

US. Massachusetts RTK - Substance List

Cristobalite (CAS 14464-46-1)	Listed.
Quartz (CAS 14808-60-7)	Listed.
Silica, fume (CAS 69012-64-2)	Listed.

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

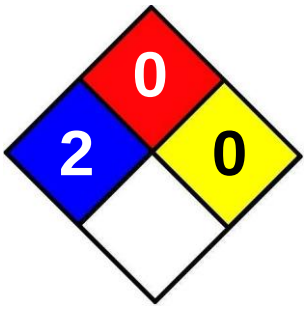
Cristobalite (CAS 14464-46-1)	Listed.
Quartz (CAS 14808-60-7)	Listed.
Silica, fume (CAS 69012-64-2)	Listed.

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.
E - Safety Glasses, Gloves, Dust Respirator

HMIS® ratings
Health: 2*
Flammability: 0
Physical hazard: 0
Personal protection: E

NFPA Ratings



Disclaimer The information in the sheet was written based on the best knowledge and experience currently available.